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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,720	08/20/2003	Steven R. Mead	2400/18	8169

23381 7590 06/16/2006

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EXAMINER	
MILLER, ROBERT J	
ART UNIT	**PAPER NUMBER**
3635	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/645,720	MEAD, STEVEN R.	
	Examiner	Art Unit	
	Robert J. Miller	3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 22, 31, 32, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 4,804,578 Crookston.

In regard to claims 1, 31, and 32, Crookston discloses in the abstract a composite comprising a top layer and bottom layer and an intermediate acoustic layer formed by a plurality of shaped beads , which are integrally joined together.

In regard to claim 22, the beads are of such shape as to provide spaces for fluid communication with one another (c2, l51-63).

In regard to claims 2, 35, and 36, beads are substantially spherical in shape (c3, l15) and some of said beads are truncated (fig. 2, crosshatching). The beads are of such shape as to provide spaces for fluid communication with one another (c2, l51-63).

Claims 13, 14, 15, 16, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 4,651,494 Van Wagoner. Van Wagoner discloses a composite

having a sub floor 16, a top floor 46, and an acoustic layer 42 made up of resilient beads bonded together (c5, l54-66).

In regard to claims 13, 14, 15 and 39, a moisture proof film layer 26 positioned adjacent to said acoustic layer between the acoustic layer 42 and the sub floor 16.

In regard to claim 16, Van Wagoner also discloses a moisture proof film layer 44 above the acoustic layer 42 (c6, l18-35).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3-12 and claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 as applied to claims 1 and 31 above in view of Van Wagoner '494.

Crookston '578 discloses all the limitations of claims 1 and 31 as above but is silent as to their physical properties of claims 3-12 and claims 37 and 38.

Although the references are silent as to their physical properties recited in claims 3-12, 37, and 38 in which the shape, flat horizontal and coplanar surfaces in abutting relation with the top floor layer, and void spaces are recited, Van Wagoner teaches the use of alternate three dimensional shapes such as cubes, solid rectangles, in combination with a spherical configuration (c6, l11-17) and Crookston teaches the use of beads having coplanar surfaces adjacent to the top layer and also having spaces between the beads for fluid communication there through.

Therefor, absent a showing of criticality with respect to those properties (result effective variables), it would be obvious to one of ordienary skill in the art at the time of invention to provide beads of truncated spherical shape having coplanar horizontal surfaces in abutting relation and thereby substitute beads of different shape characteristics into the acoustic layer of Crookston.

It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d272 205 USPQ 215 (CCPA 1980).

Claims 17, 18, 19, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 as applied to claims 1 and 31 above in view of USP 4,464,428 Ebert et al.

Crookston '578 discloses all the limitations of claims 1 and 31 as above but is silent as to the material properties of claims 17, 18, 19, and 41.

In regard to claim 17, Ebert et al '428 teaches the use of material foam used for sound insulation (c5, l60).

In regard to claims 18 and 41, Ebert et al '428 teaches the use of a closed cell foam (c5, l45).

In regard to claim 19, Ebert et al '428 teaches that said closed cell foam is polyethylene foam (c5, l45).

It would therefor be obvious absent a showing of criticality with respect to those properties (result effective variables) to a person of normal skill in the art at the time of invention to utilize the materials taught in Ebert et al '428 in the foam layer of Crookston '578 for sound insulation purposes.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 as applied to claim 1 as above in view of USP 5,916,672 Reeves et al.

Crookston '578 discloses all the limitations of claim1 as above but is silent as to the material properties of claims wherein the closed cell foam is polypropylene.

Reeves et al '672 teaches the use of a composite structure having a polypropylene foam core (abstract).

I would therefor be obvious absent a showing of criticality with respect to those properties (result effective variables) to one of normal skill in the art at the time of invention to utilize the polypropylene core of Reeves et al in Crookston '578 for sound insulation purposes.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 as applied to claim 31 above in view of USP 4,669,246 Freeman.

Crookston '578 discloses all the limitations of claim 31 as above but is silent as to the material properties of claim 40 which includes a non-woven fabric positioned atop said acoustic layer.

Freeman '246 teaches the use of non-woven fabric layers 18 and 20 on top of acoustic layer 16.

It would therefor be obvious absent a showing of criticality with respect to those properties (result effective variables) to one of normal skill in the art at the time of invention to utilize a fabric layer of Freeman '246 between the acoustic layer and top layer of Crookston '578.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 as applied to claim 1 above in view of USP 3,573,144 Andersen.

Crookston '578 discloses all the limitations of claim 1 as above but is silent as to the material properties of claims pertaining to the density of the acoustic layer being about two to ten pounds per cubic foot.

Anderson teaches the use of a composite with an acoustic layer having a density between two and ten pounds per cubic foot (c4, l61-65).

It would therefor be obvious absent a showing of criticality with respect to those properties (result effective variables) to one of normal skill in the art at the time of invention to substitute the acoustic material of Andersen '144 for that of Crookston '578.

Claims 28, 30, 33, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 as applied to claims 1 and 31 above in view of USP 4,250,136 Rex.

Crookston '578 discloses all the limitations of claims 1 and 31 as above but is silent as to the physical properties of claims 28 and 43 wherein the spacing between the beads is about 35 to 45 percent of the acoustic layer volume and the physical properties of claims 30 and 34 wherein said beads are both elastic and inelastic in the acoustic layer.

In regard to claims 30 and 33, Rex teaches the use of a composite having an acoustic layer 16 comprising a mixture of elastic and inelastic foam beads (c4, l30-46).

In regard to claims 28 and 43, Rex also teaches that spacing between the beads in the amount of 35-45 percent of the acoustic layer volume.

It would be obvious absent a showing of criticality with respect to those properties (result effective variables) to one of ordinary skill in the art at the time of invention to substitute the foam materials of Rex '136 for that of Crookston '578.

Claims 23 through 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 in view of USP 5,718,968 Cutler et al. Cutler teaches a method for compressing polystyrene foam beads (abstract) to create an increased density foam layer.

Crookston '578 discloses all the limitations of claim 1 as above but is silent as to the physical properties of claims 23-26 pertaining to size of said beads and thickness of said acoustic layer.

In regard to claim 23, the beads of Crookston if aligned in a single layer and compressed as taught by Cutler would create a thickness of the acoustic layer which is less than the projected bead diameter.

In regard to claims 24, 25, and 26, Crookston teaches the use of beads having diameters from 1/8 to ½ inch.

It would then be obvious absent a showing of criticality with respect to those properties (result effective variables) to one of ordinary skill in the art at the time of invention to create an acoustic layer having a thickness which is less than the diameter of the foam beads.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 in view of USP 3,659,635 Eustice.

Crookston '578 discloses all the limitations of claim 31 as above but is silent as to the material properties of claim 34 wherein said beads are made of inelastic material.

Eustice teaches the use of inelastic particles 20 in an acoustic layer 16.

It would then be obvious absent a showing of criticality with respect to those properties (result effective variables) to one of ordinary skill in the art at the time of invention to utilize the inelastic particles of Eustice '635 in the acoustic layer of Crookston.

Claims 27, 29, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crookston '578 as applied to claims 1 and 31 above.

Crookston '578 teaches all the limitations of claims 1 and 31 as above but is silent as to the physical properties of the percentages of air of the closed cell foam beads in claims 27, 29, 42, and 44.

Although the references are silent on the quantities of air recited in claims 27, 29, 42, and 44, absent a showing of criticality with respect to those properties (result effective variables), it would have been obvious to a person of ordinary skill in the art at the time of invention to optimize those characteristics through routine experimentation. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d272 205 USPQ 215 (CCPA 1980).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Miller whose telephone number is 571-272-1782. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Friedman can be reached on 571-272-6842. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

rjm

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Group 3600